REMARKS

Claims 18-23 have been amended. Subsequent to the entry of the present amendment, claims 18-23 are pending and at issue. These amendments add no new matter as the claim language is fully supported by the specification and original claims.

I. Election/Restriction

Claims 1-17 and 24-35 have been withdrawn.

II. Rejections under 35 U.S.C. §112, Second Paragraph

Claim 23 is rejected under 35 U.S.C. §112, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Office Action alleges claim 23 "is indefinite in the recitation "or aluminum mesh inside the channel" in lines 1-2 of the claim. It is unclear if the term "mesh inside the channel" only modifies "aluminum" of all of the metals listed in the claim".

Applicants have amended to claim to clarify that the mesh modifies all of the metals listed in the claim. Support for this can be found in paragraph [0101] where it states "In certain embodiments, a mesh including silver, gold, platinum, copper or aluminum can be included in the reaction chamber or channel to provide an increased signal due to surface enhanced Raman or surface enhanced Raman resonance".

Accordingly, for at least the reasons stated above, reconsideration and withdrawal of the rejection of amended claim 23 under 35 U.S.C. §112 is respectfully requested.

III. Rejections under 35 U.S.C. §102

Claims 18-20 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Davis. (U.S. Patent Application Publication No. US2002/0102595, published 1 August 2002). Claims 18-23 are rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Su et al. (U.S. Patent Application Publication No. US2003/0186240 A1, published 2 October 2003). Claims 18-22 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Shipwash. (U.S. Patent Application Publication No. US2002/0058273 A1, published 16 May 2002). Applicants respectfully traverse these rejections.

A rejection of claims under 35 U.S.C. §102 is improper unless each and every element of the claimed subject matter is found, either expressly or inherently described, in a single prior art reference (Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631 (Fed. Cir. 1987); MPEP §2131).

Applicants have amended claim 18 to clarify that the apparatus includes both inlet and outlet channels in fluid communication with the reaction chamber and the use of duplicate Raman detection units, a first Raman detection unit operably coupled to the inlet channel and a second Raman detection unit operably coupled to the outlet channel. Support for this amendment can be found in the specification, for example, in paragraph [0040], where it states "the reaction chamber 11 can be attached to a flow-through system" and that nucleotides "17 can enter the reaction chamber 11 and be incorporated into a nascent strand 16" and the "unincorporated nucleotides 17 can pass out of the reaction chamber 11 into a second channel, where they are detected by Raman spectroscopy". "In such alternatives, duplicate detection units 12 can be positioned before and after the reaction chamber 11".

A review of the prior art references, Davis, Su et al. and Shipwash, indicates they do not disclose both inlet and outlet channels in fluid communication with the reaction chamber and the use of duplicate Raman detection units, a first Raman detection unit operably coupled to the inlet

channel and a second Raman detection unit operably coupled to the outlet channel. As such, Davis, Su et al. and Shipwash do not each and every element of amended claim 18.

Accordingly, for at least the reasons stated above, reconsideration and withdrawal of the rejection of amended claim 18, along with dependent claims 19-23, under 35 U.S.C. §102 is respectfully requested.

IV. Rejections under 35 U.S.C. §103

Claims 18 and 23 are rejected under 35 U.S.C. §103(a) as allegedly obvious over Shipwash. (U.S. Patent Application Publication No. US2002/0058273 A1, published 16 May 2002) in view of Anderson et al (U.S. Patent No. 6,168,948 B1, issued 2 January 2001). This rejection is respectfully traversed.

To establish a prima facie case of obviousness, the following three basic criteria must be met: (1) there must be some suggestion or motivation to modify the reference(s) as proposed by the Examiner; (2) there must be a reasonable expectation of success and (3) the prior art reference(s) must teach or suggest all of the claim limitations.

As discussed above, Applicants have amended claim 18 and allege that Shipwash does not disclose all of the claim limitations of the amended claim. In particular, Shipwash does not disclose an apparatus that includes both inlet and outlet channels in fluid communication with the reaction chamber and the use of duplicate Raman detection units, a first Raman detection unit operably coupled to the inlet channel and a second Raman detection unit operably coupled to the outlet channel. The addition of Anderson does not cure this defect.

For at least for the reasons set forth above, it is submitted that the cited references, either separately or in combination, fail to teach or suggest all of the claim limitations of the amended claims. Accordingly, reconsideration and withdrawal of the rejection is respectfully requested.

V. Nonstatutory Double Patenting

Claims 18-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27-30 of copending Application No. 11/329,693.

Claims 18, 20, 22 and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 6, 7, 8, 10, 11, 13, and 15 of copending Application No. 11/255,386.

Claims 18-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 24-27 of copending Application No. 11/235,796.

Claims 18, 20, 22 and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 11, and 15 of copending Application No. 10/886,400.

Claims 18, 20, 22 and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 3, 11, 15 and 18 of copending Application No. 10/886,094.

Claims 18-21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 27-30 of copending Application No. 10/660,902.

Claims 1 and 20-23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 5-7 and 10-13 of U.S. Patent No. 6,982,165.

A terminal disclaimer accompanies this Response. Accordingly, withdrawal of the rejection of claims under the judicially created doctrine of obviousness-type double patenting is respectfully requested.

VI. Conclusion

In view of the above amendments and remarks, reconsideration and favorable action on all claims are respectfully requested. In the event any matters remain to be resolved, the Examiner is requested to contact the undersigned at the telephone number given below so that a prompt disposition of this application can be achieved.

A check in the amount of $130.00 as payment of the Terminal Disclaimer Fee accompanies this Response. The Commissioner is hereby authorized to charge any additional fees that may be associated with this communication, or credit any overpayment to Deposit Account No. 07-1896. A copy of the Transmittal Sheet is enclosed.

Respectfully submitted,

Date: June 14, 2006

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